



Massachusetts Department of Environmental Protection Source Water Assessment and Protection (SWAP) Report For Long Pond Village Mobile Homes

What is SWAP?

The Source Water Assessment and Protection (SWAP) Program, established under the federal Safe Drinking Water Act, requires every state to:

- ? inventory land uses within the recharge areas of all public water supply sources;
- ? assess the susceptibility of drinking water sources to contamination from these land uses; and
- ? publicize the results to provide support for improved protection.

SWAP and Water Quality

Susceptibility of a drinking water source does *not* imply poor water quality. Actual water quality is best reflected by the results of regular water tests.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

Prepared by the
Massachusetts Department of
Environmental Protection,
Bureau of Resource Protection,
Drinking Water Program
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Table 1: Public Water System (PWS) Information

PWS NAME	Long Pond Village Mobile Homes
PWS Address	1035 Long Pond Road
City/Town	Plymouth, MA 02360
PWS ID Number	4239051
Local Contact	Richard Nieboer
Phone Number	617-365-4171

Well Name	Source ID#	Zone I (in feet)	IWPA	Source Susceptibility
Well #1	4239051-01G	250	633	Moderate
Well #2	4239051-02G	250	633	Moderate

Introduction

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential sources of contamination, including septic systems, road salting, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential sources of contamination the assessment helps focus protection efforts on appropriate Best Management Practices (BMPs) and drinking water source protection measures. Department of Environmental Protection (DEP) staff is available to provide information about funding and other resources that may be available to you.

This report includes:

1. Description of the Water System
2. Discussion of Land Uses in the Protection Areas
3. Recommendations for Protection
4. Attachments, including a Map of the Protection Areas

What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and an Interim Wellhead Protection Area (IWPA).

- **The Zone I** is the area that should be owned or controlled by the water supplier and limited to water supply activities.
- **The IWPA** is the larger area that is likely to contribute water to the well.

In many instances the IWPA does not include the entire land area that could contribute water to the well. Therefore, the well may be susceptible to contamination from activities outside of the IWPA that are not identified in this report.

1. Description of the Water System

Wells #1 & #2 provide a public water supply to Long Pond Village Mobile Homes. Both wells have a Zone I of 250 feet and an Interim Wellhead Protection Area (IWPA) of 633 feet. . The IWPA provides an interim protection area for a water supply well when the actual recharge area has not been delineated. The actual recharge area to the well may be significantly larger or smaller than the IWPA. The well is located in an aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers that can prevent contaminant migration. Please refer to the attached map for land uses that are located within the Zone I and IWPA.

DEP requires public water suppliers to monitor the quality of the water. For current information on monitoring results and treatment, please contact the public water system person listed above in Table 1. Drinking water monitoring reporting data is also available on the web via EPA's Envirofacts website at http://www.epa.gov/enviro/html/sdwis/sdwis_query.html.

2. Discussion of Land Uses in the Protection Areas

Key issues include the following.

1. Zone I Issues
2. Residential uses

Table 2: Activities within the Water Supply Protection Areas

Potential Contaminant Sources	Zone I	IWPA	Threat	Potential Concern
homes	Yes	Yes	M	pesticides and fertilizers from lawn care; leaks or spills of automotive fluids; stormwater; microbial contamination from septic systems
local roads	No	Yes	M	leaks or spills of fuel and other substances; contamination from vehicular accidents; over-application or spills of pesticides for vegetation management along rights-of-way; stormwater contaminants; road salt

* For more information on Contaminants of Concern associated with individual facility types and land uses please see the SWAP Draft Land Use / Associated Contaminants Matrix on DEP's website - www.state.ma.us/dep/brp/dws/.

Glossary

Aquifer: an underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

Hydrogeologic Barrier: an underground layer of impermeable material that resists penetration by water.

Recharge Area: the surface area that contributes water to a well.

What is Susceptibility?

Susceptibility is a measure of a well's potential to become contaminated due to land uses and activities within the Zone I and Interim Wellhead Protection Area (IWPA).

The overall ranking of susceptibility to contamination for the wells is moderate based on the presence of at least one moderate threat within the Zone I and IWPA.

1. **Zone I** – The public water system does not meet DEP's Zone I requirements because the system does not own or control the entire Zone I. A portion of a home is located within the Zone I.

Recommendations

- ✓ Keep additional non-water supply activities out of the Zone I.
- ✓ Distribute the fact sheet *Residents Protect Drinking Water*.
- ✓ Do not use pesticides or fertilizers within the Zone I.
- ✓ Use Best Management Practices to handle, store and dispose of hazardous materials and wastes.

2. Residential (Other Land Uses of Concern)

There is low-density, residential use within the IWPA of the well. In general, normal residential activities pose a moderate threat to public and private water supplies. The use of best management practices minimizes the potential threats to both private and public wells.

Improper disposal of household hazardous chemicals to septic systems is a potential source of contamination to groundwater. If septic systems fail or are not properly maintained they can be potential sources of microbial contamination.

Household hazardous chemicals may include automotive wastes, paints, solvents, pesticides, fertilizers, and other substances. Improper use, storage, and disposal of chemical products used in homes are potential sources of contamination.

If managed improperly, Underground and Aboveground Storage Tanks (UST and AST) can be potential sources of contamination due to leaks or spills of the fuel oil they store.

Recommendation

- ✓ Educate residents on source protection issues including proper septic system operation and maintenance, household hazardous materials storage and disposal, and AST/UST best management practices (BMPs).

3. Recommendations for Protection

Implementing protection measures will reduce susceptibility to contamination.

Priority Recommendations

Zone I

- ✓ Inspect the Zone I.
- ✓ Post water supply protection signs.

Training and Education

- ✓ If applicable, educate employees on source protection measures for protecting water supplies. Describe proper use, storage and disposal of materials within the Zone I.

Facilities Management

- ✓ Do not use or store pesticides or fertilizers within the Zone I. Avoid using de-icing materials if possible.

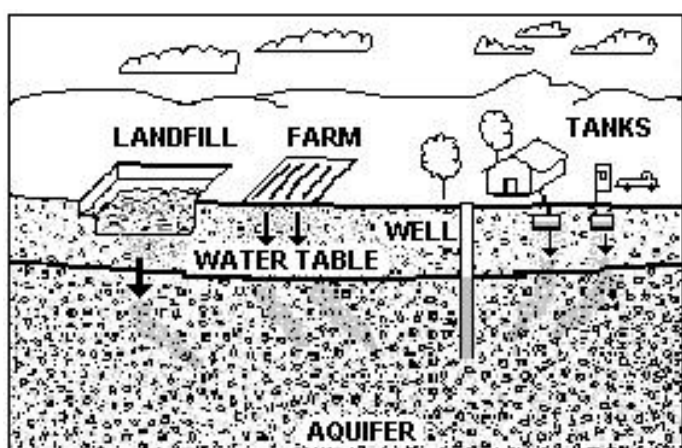


Figure 1: Example of how a well could become contaminated by different land uses and activities.

For More Information

Contact Isabel Collins in DEP's Lakeville Office at (508) 946-2726 for more information and for assistance in improving current protection measures.

Additional Documents

To help with source protection efforts, more information is available by request or online at www.state.ma.us/dep/brp/dws, including:

1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practices information, and general water supply protection information;
2. MA DEP SWAP Strategy; 3. Land Use Pollution Potential Matrix; and
4. Draft Land Use/Associated Contaminants Matrix.

Copies of this assessment have been made available to the public water supplier and town boards.

Planning

- ✓ Work with town officials to improve water supply protection.

Funding opportunities are described in *Grant and Loan Programs: Opportunities for Watershed Protection, Planning and Implementation* at <http://www.state.ma.us/dep/brp/mf/files/glprgm.pdf>.

Citizens and community officials should use this SWAP report to encourage discussion of local drinking water protection measures.

4. Attachments

- Map of the Public Water Supply Protection Area
- Recommended Source Protection Measures fact sheet
- *Residents Protect Drinking Water* fact sheet